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L1: Entry 1 of 2

File: EPAB

Oct 28, 1993

PUB-NO: WO009321028A1
DOCUMENT-IDENTIFIER: WO 9321028 A1
TITLE: TYRE PROTECTOR

PUBN-DATE: October 28, 1993

INVENTOR-INFORMATION:

| NAME | COUNTRY |
|---------------------------------|---------|
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APPL-NO: RU09200039

APPL-DATE: February 28, 1992

PRIORITY-DATA: RU09200039W (February 28, 1992)

US-CL-CURRENT: 152/209.12

INT-CL (IPC): B60C 11/04

EUR-CL (EPC): B60C011/08; B60C011/11

ABSTRACT:

The present tyre protector comprises main grousers (2) and auxiliary grousers (14), each of them containing two pushing surfaces (3 and 4) and a supporting surface (5) located therebetween. The pushing surfaces (3 and 4) are identically oriented in the moving direction and have a different height. In the protector cross section, parallel to the equatorial plane (15) of the tyre, the line (6) which connects the points (7 and 8) of the pushing surfaces (3 and 4) of the grouser (2, 14) forms, at the point of its conjugation with the pushing surface of a smaller height, and angle (α) with the radius (R).

WEST**End of Result Set**

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L1: Entry 2 of 2

File: DWPI

Oct 28, 1993

DERWENT-ACC-NO: 1993-351504

DERWENT-WEEK: 199344

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TITLE: Tractor or heavy vehicle tyre tread - has main and auxiliary projections with thrust surfaces and supporting surfaces of different heights for improved grip on soft ground

INVENTOR: ASHAKOVA, N; ELOEV, A K ; KOSTENKO, L A ; MIRONOVA, G V ; OGNEVA, E G ; SEMENOV, V A ; SHPILKO, A V

PATENT-ASSIGNEE:

ASSIGNEE

CODE

MATSEPURO V M

MATSI

PRIORITY-DATA: 1992WO-RU00039 (February 28, 1992)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|----------------------|------------------|----------|-------|------------|
| <u>WO 9321028 A1</u> | October 28, 1993 | R | 033 | B60C011/04 |

DESIGNATED-STATES: JP US AT BE CH DE DK ES FR GB GR IT LU MC NL SE

CITED-DOCUMENTS:DE 3913199; SU 105380 ; SU 1133122 ; US 3844326

APPLICATION-DATA:

| PUB-NO | APPL-DATE | APPL-NO | DESCRIPTOR |
|--------------|-------------------|----------------|------------|
| WO 9321028A1 | February 28, 1992 | 1992WO-RU00039 | |

INT-CL (IPC): B60C 11/04

ABSTRACTED-PUB-NO: WO 9321028A

BASIC-ABSTRACT:

Tread has a series of main and auxiliary projecting blocks, each of which has two supporting surfaces (3,4) and a thrust surface (5) between them. The projections are made with supporting surfaces of different heights while being inclined in the direction of travel. In a section of the tread, parallel to its equatorial plane a line (6) connecting the points (7,8) of the supporting surfaces which are furthest from the axis of the tyre, form an angle with the tyre's radius which is defined by the formula $\arctg R + hy(t/s)$ (I) where R is the radius of the tyre at the base of the projections, and hy and t are respectively the height and width of a projection.

The thrust surfaces of the projections can be straight, concave or convex, or a combination of these.

ADVANTAGE - Tyre has improved grip on soft ground.

CHOSEN-DRAWING: Dwg.2/21

TITLE-TERMS: TRACTOR HEAVY VEHICLE TYRE TREAD MAIN AUXILIARY PROJECT THRUST SURFACE

SUPPORT SURFACE HEIGHT IMPROVE GRIP SOFT GROUND

DERWENT-CLASS: A95 Q11

CPI-CODES: A12-T01B;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1] 017 ; H0124*R Polymer Index [1.2] 017 ; ND01 ; Q9999 Q9256*R Q9212
; Q9999 Q9234 Q9212 ; K9416 ; B9999 B5367 B5276

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0009 0231 2658 2826 3258 3300

Multipunch Codes: 017 032 04- 41& 50& 57& 597 599 651 672

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1993-155984

Non-CPI Secondary Accession Numbers: N1993-271185

09/673738

| L Number | Hits | Search Text | DB | Time stamp |
|----------|---------|--|---|---------------------|
| 1 | 42904 | tire and tread | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:56 |
| 2 | 2139865 | block | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:56 |
| 3 | 39827 | block same height | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:57 |
| 4 | 687 | (block same height) same decrease | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:57 |
| 5 | 215 | (block same height) same decreasing | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:57 |
| 6 | 278 | (block same height) same decreased | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:57 |
| 7 | 24 | ((block same height) same decrease) same tread | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:57 |
| 8 | 16 | ((block same height) same decreasing) same tread | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:58 |
| 9 | 12 | ((block same height) same decreased) same tread | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 13:58 |
| 10 | 44 | ((block same height) same decrease) same tread) or ((block same height) same decreasing) same tread) or ((block same height) same decreased) same tread) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:00 |
| 11 | 132387 | block same pressure | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:01 |
| 12 | 467 | (block same pressure) same tread | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:01 |
| 13 | 413 | (tire and tread) and ((block same pressure) same tread) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:12 |

| | | | | |
|----|-------|--|---|---------------------|
| 14 | 48752 | block with center | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:13 |
| 16 | 397 | (block with center) with concave | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:14 |
| 17 | 583 | (block with center) with curved | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:14 |
| 18 | 942 | ((block with center) with concave) or ((block with center) with curved) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:14 |
| 19 | 31 | (tire and tread) and (((block with center) with concave) or ((block with center) with curved)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:16 |
| 20 | 1082 | block with protuber\$ | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:16 |
| 21 | 5 | (tire and tread) and (block with protuber\$) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:16 |
| 22 | 6209 | block with protrusion | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:17 |
| 23 | 1098 | block with bump | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:17 |
| 24 | 7278 | (block with protrusion) or (block with bump) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:17 |
| 25 | 68 | (tire and tread) and ((block with protrusion) or (block with bump)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:19 |
| 26 | 16176 | suction adj1 cup | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:21 |
| 27 | 60 | (tire and tread) and (suction adj1 cup) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:23 |
| 28 | 5210 | (block with center) same edge | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:24 |

| | | | | |
|----|-------|--|---|---------------------|
| 29 | 15661 | (block with center) same end | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:24 |
| 30 | 18688 | ((block with center) same edge) or ((block with center) same end) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:24 |
| 31 | 568 | (tire and tread) and (((block with center) same edge) or ((block with center) same end)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:24 |
| 32 | 2827 | (block with center) with edge | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:24 |
| 33 | 9076 | (block with center) with end | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:24 |
| 34 | 11118 | ((block with center) with edge) or ((block with center) with end) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:24 |
| 35 | 394 | (tire and tread) and (((block with center) with edge) or ((block with center) with end)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB | 2003/12/04 14:45 |